

Employment and Economic Growth Nexus in Nigeria

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Abstract

This paper examines the employment and economic growth relationships in the Nigerian economy. A simple model of employment was formulated and estimated using the Ordinary Least Squares technique before and after the time series data used for the study were corrected for non-stationarity using Hodrick-Prescott filter. The result of our econometric analysis shows that a positive and statistically significant relationship exists between employment level and economic growth in Nigeria while a negative relationship was observed between employment growth rate and the GDP growth rate in the economy. We concluded the paper by advocating for increased labour-promoting investment strategies that will help to reduce the high current open unemployment in Nigeria.

Key Words: Employment, Economic growth, Employment Elasticity.

JEL Classification Codes: E24, J21, O47

1. Introduction

The goal of achieving full employment among other macroeconomic goals is an important one in many developing nations where unemployment and underemployment has been a major cause and consequence of widespread poverty. However, in spite of the very high-sounding electioneering promises of political leaders in many poor nations of the world, the achievement of impressive growth and decent employment remains a mirage. High rate of unemployment, unimpressive growth rates and poverty among other miseries of the populace, are the order of the day. For instance, facts available for the Nigerian economy show a high rate of unemployment and underemployment. The rate of open unemployment was 12% in March 2005; it rose to 19.7% in March 2009 while the rate of underemployment hovered around 19% in 1998 (Adebayo and Ogunrinola, 2006, NBS 2010). Among the youths in the 15-24 age cohort, the rate of unemployment is over 40% according to the 2010 edition of the Labour Force Sample Survey of the National Bureau of Statistics. Thus, the issue of real output and employment growth in developing nations is a sine qua non for poverty reduction and a more equitable income distribution (Fofana 2001).

Many studies on Nigeria's employment situation have been devoted to unemployment and its determinants and/or its impacts on economic growth (Adebayo and Ogunrinola, 2006; Oladeji, 1994; Omotor and Gbosi 2006). However, to our knowledge, not much research attention has been given to the estimation of employment elasticity with respect to economic growth in Nigeria. Though from a cursory look at the Nigerian data on employment level and real GDP, it appears that the recent economic growth trends and patterns have been insufficient to make any appreciable impact on employment generation and poverty reduction, but this has not been sufficiently investigated empirically in the literature (Oni, 2006; Patterson et al 2006). This study is therefore an attempt to fill this gap by employing an econometric method for the purpose of estimating the employment-economic growth relationship in Nigeria. The rest of this paper is organised as follow: Section 2 presents the review of relevant literature on the employment-economic growth relationship; Sections 3 presents the data sources and research methodology respectively; section 4 reports the empirical evidences generated from data analysis while section 5 concludes the paper.

2. Theoretical Issues and Brief Survey of Literature

2.1 Theoretical Issues

The desire to expand decent and productive employment is at the heart of any nations' macroeconomic policies geared towards poverty reduction.

In spite of its importance, the implementation of policies on employment creation in many developing nations has not yielded much impact as there is a wide gap between the jobs available and the number of job seekers actively seeking work in most poor nations. Not only is the level of decent jobs diminishing, the challenges of globalisation and economic liberalisation has brought about new realities having uncertain implications for employment creation in many developing nations (Ogunrinola and Osabuohien, 2010). The high rate of labour force growth vis-a-vis the low and dwindling rate of formal sector job growth has made the labour market in developing nations to exhibit some peculiar characteristics. First is the widening of the informal sector where many who would have remained in open unemployment take up low-wage jobs or even self-employment while still hoping to pick up formal sector job when available. Second, the unemployed in the labour market in poor nations do not enjoy any form of unemployment insurance or any social benefit from the government. Third, the reported unemployment rates in official documents are usually very low due to high rate of disguised employment and underemployment in the informal sector. Fourth, self-employment, part-time employment, and unpaid employment in family enterprises have a disproportionate share in total employment. All these are pointers to the need for a search for solution to employment problems in developing nations.

In an attempt to explain the concept of employment and unemployment, the classical economic analysis based the weight of its argument on the Walrasian general equilibrium model in which price flexibility is the key factor in the correction of any labour market disequilibrium. The flexible ruling market price also helps to maintain the system-wide market clearing equilibrium. Thus, in the classical labour market, shortages or surplus of labour is dealt with by wage movement: the wage falling below the equilibrium to mop up excess labour supply, and rising above the equilibrium when there are shortages. By so doing, the incidence of involuntary unemployment is removed from the classical labour market. However, at the ruling market clearing wage, unemployment that can exist are the voluntary and frictional types.

In Keynes' analysis, the classical view of wage flexibility and its acceptance by labour was rejected while the power of the invisible hands to restore employment level and output after a recession/depression did not materialise during the depressions of the 1930's. Keynes assumed that workers will not be willing to accept wage cut to secure more employment even if they will accept reduction in real wage brought about by rising prices at constant money wage. His weight of analysis rests on the influence that government policy can have in influencing the level of aggregate demand in the economy. Full employment will only be restored through an increase in aggregate demand and not through the classical prescription of falling money wages. This is because, Keynes believed wages to be inflexible in the downward direction, as workers through their union will resist wage cut. Thus, the combined influences of union militancy, worker's obstinacy in resisting money wage cut and the fact that product price might fall in the same proportion with wage cut, thereby leaving real wage unchanged might make classical predictions unrealistic. Rather than relying on wage flexibility, Keynes recommended fiscal policy measures in form of government deficit budgeting spent on public works. This has the potentials of increasing aggregate demand and hence, removing the incidence of involuntary unemployment.

For a developed economy, Keynes' remedial policy for removing involuntary unemployment might be applicable but its potency for solving unemployment problem in developing countries are rather very doubtful for two reasons. First, the nature of unemployment in these countries differs from those in the developed nations. While developing countries suffer from chronic unemployment for a long period of time due to either deficiency or inefficient use of capital and other co-operant factors, unemployment in developed nations is cyclical resulting from low level of aggregate demand. Thus unemployment in poor nations might not be receptive wholly to demand-augmenting policies due to structural rigidities especially with regards to the supply of output (Jhingan, 1997). As a result, increases in aggregate demand will only lead to rising product prices rather than increasing employment. Second, Keynes' policy prescription relates to open unemployment rather than disguised unemployment which has assumed enormous dimension in developing nations. However, this did not receive attention in his analysis since it is not an important phenomenon in developed nations.

In spite of these however, Keynes analyses reflect some aspects of labour market behaviours in developing nations. For example, in the formal wage sector of the economy, the market is not usually cleared as a result of too high a wage level which is policy, rather than market-determined. Moreover, the actions of unions and government minimum wage laws help to keep wages above the market clearing level. In most cases, this wage does not decline appreciably despite the usually long queue of the unemployed willing to take up formal sector jobs.

However, with time, workers who are not able to get formal sector job usually lower their expectations by taking up informal employment at the going level of earnings. In most developing nations, the informal sector is therefore relatively large and growing as a result of low labour absorptive capacity of the formal sector.

2.2 Brief Survey of Literature

Several empirical studies have been carried out to examine the nature and character of employment situations in developing nations in general and Nigeria in particular (Ogunrinola, 1991; Oladeji, 1987). Given the high proportion of the informal sector in the labour market of developing nations, Ogunrinola (1991) examined the issue of employment and earnings of the urban informal sector of Ibadan. The study found that the urban informal sector of Ibadan has contributed significantly to employment creation, skill development and entrepreneurial development. For instance, about 90% of the entrepreneurs were trained under the apprenticeship systems who are also involved in capacity development of others. Onwioduokit (2006) examined the link between unemployment and several macroeconomic variables in Nigeria and concluded that 'the shift in the composition of unemployment in Nigeria since 2000 is very instructive as it has brought to the fore the inadequacies of the received theory towards explaining the unemployment phenomenon in the country'. Oladeji (1987) investigated the issue of graduate unemployment in Nigeria while Borisade (2001) examined the structure of educational system and employment relationship in Nigeria. Both conclude that a re-orientation of the educational system towards the employment needs of the economy would go a long way towards promoting productive employment in Nigeria. In terms of the relationship between the level and growth rate of economic activity of the nation and employment generation, a number of empirical studies have been conducted in several different nations. Swane and Vistrand (2006) examined the GDP-employment growth relationship in Sweden. Using the employment-population ratio as a measure of the extent of employment generation, the study found a significant and positive relationship between GDP and employment growth. This finding supports the strand of theory suggesting that the positive relationship between GDP and employment is normal and that any observed jobless growth might just be a temporary deviation. They however make useful suggestion for further research on the causal relationship between employment and GDP.

In an empirical survey of the link between employment and growth in sub-Saharan African countries, Yogo (2008) is of the view that the employment issues in sub-Saharan Africa is mostly a matter of quality rather than quantity. According to him, the reason for the observed weak employment performances could not be found in labour market rigidities; but that the observed increase of working poor could be explained by the weakness of economic growth over time. Examining the relationship between economic growth, employment and unemployment in the European Union (EU), Walterskirchen (1999) analysed the link between economic growth and the labour market. He found that the relationship between GDP growth and change in unemployment is divided into two components viz: those changes in employment and unemployment rates governed by economic factors as well as those governed by demographic influences and labour market policies. He employed time series analysis for individual EU country, while for all the countries he employed the use of panel data. The finding of the study showed a strong positive correlation between GDP growth and change in the level of employment.

Sawtelle (2007) estimated and compared elasticities in each of fourteen industry sectors of the US with respect to changes in real GDP during the ten year period of 1991-2001. Also, the study estimated for each industry sector and the aggregate economy two models of employment determination. One of the models related employment to real GDP while the other related employment to several other macroeconomic variables affecting employment together with the real GDP. Since the demand for labour is a derived demand, the expansion of real GDP for instance generates increased derived demand for workers. The findings of Sawtelle (2007) are in line with those of Pandolino and Vivarelli (1997). Generally, studies have employed econometric research to estimate the elasticity of employment with respect to real GDP as well as to examine gender differences in employment cyclically. Our study follows a similar approach for Nigeria.

3. The Data and the Model

3.1 The Data

The major source of data for this study is the Statistical Bulletin published annually by the Central Bank of Nigeria (CBN, 2006). Other sources of data include the publications of the National Bureau of Statistics as well as those of the defunct National Manpower Board (now merged with the Nigerian Institute of Social and Economic Research).

Time series data for real gross domestic product (GDP), foreign direct investment and government expenditure were obtained from Statistical Bulletin while employment figures were from the National Manpower Board. We used the published data on foreign private investment as proxy for foreign direct investment. Finally, we used total government expenditure (recurrent and capital) as proxy for public expenditure.

3.2 The Model and the Method of Analysis

Several empirical studies employing various macro-economic variables (as suggested by theory) in cross-country analysis regressions have been employed to examine the employment-economic growth relationship in both developed and developing nations. For instance, Levine and Renelt (1992), Barro (1991) and Becker et al. (1990) used simple regression analysis to assess the relationship between the level of employment and other macro-variables highlighted in their studies. Pandalino and Vivarelli (1997) used panel data to study the employment/economic growth relationship in G-7 countries. Fofana (2001) studied the employment-economic growth relationship for a single country, Cote d'Ivoire using time series data for the study. The methodology of this study takes after Fofana's, and as such we specify our basic model as:

$$EMPT = f(GDP, FPC, PE) \dots\dots\dots (1)$$

Where:

EMPT = Total Employment
 GDP = Real Gross Domestic Product
 FPC = Foreign Private Capital (a proxy for Foreign Direct Investment)
 PE = Public Expenditure

Assuming a linear relationship among explanatory variables the explicit form of equation (1) becomes:

$$EMPT = \beta_0 + \beta_1 GDP + \beta_2 FPC + \beta_3 PE + \varepsilon \dots\dots\dots (2a)$$

An alternative form of the equation was the replacement of GDP with the growth rate of GDP represented by GDPGR as stated in equation (2b) below:

$$EMPT = \varphi_0 + \varphi_1 GDPGR + \varphi_2 FPC + \varphi_3 PE + e \dots\dots\dots (2b)$$

We similarly estimated the non-linear form of equation (1) which is log-linearised as:

$$empt = \alpha_0 + \alpha_1 gdp + \alpha_2 fpc + \alpha_3 pe + \mu \dots\dots\dots (3a)$$

And

$$empt = b_0 + b_1 gdpgr + b_2 fpc + b_3 pe + \varepsilon \dots\dots\dots (3b)$$

The variables expressed in lower case letters are in logarithm form; while α_i , b_i ($i=1,2,3$) are the elasticities of employment level with respect to the variables to which each is attached. In terms of *a priori* expectations regarding the signs of the coefficient estimates of the four equations 2(a) to 3(b); we expect a positive sign for each of them.

In carrying out this analysis we recognise that there is a need to assess the stationarity or otherwise of the data series. This is because an attempt to regress a non-stationary series on another non-stationary series leads to spurious regression. Furthermore, statistical tests of the parameters resulting from the regression may be biased and inconsistent. A standard procedure for investigating the stationarity of a time series is via unit root tests using the Phillip Peron (PP), Dickey Fuller (DF) or Augmented Dickey Fuller (ADF) approaches, among many others. This study adopts the ADF approach which appears to be in common use. To conduct the ADF test, it is crucial to estimate the following regression:

$$\Delta y_t = \alpha \beta_1 y_{t-1} + \beta_2 t + \sum_{j=1}^T \gamma_j \Delta y_{t-j} + \varepsilon_t$$

Where

y_t = relevant time series

ε_t = white noise residual

t = linear deterministic trend which is included because the alternative hypothesis is that it is stationary around a linear trend.

The ADF test consists of testing the null hypothesis (H_0) that $\beta_1 = 0$ in the regression equation above. The hypothesis is rejected if the pseudo t-statistics resulting from the above equation is below the absolute value of the critical value reported in Engle and Yoo (1987). We used the E-Views econometric software for all the data analyses carried out in this study.

In analysing the relationship between employment and all the macroeconomic variables, we first estimated equations 2(a) and 2(b) at levels; and secondly the two equations were estimated again after the variables were detrended, and lastly we estimated the double-log equations 3(a) and 3(b).

4. Results and Discussion

4.1 Descriptive Analysis

Table 1 presents a summary of the descriptive statistics of the data used in the study. Over the period, the average total employment in the economy is 32.25 million; while the average growth rate of GDP is 3.9% and the average annual real GDP figure is ₦ 364,214.1 million. In addition to the mean figures, standard deviation for each variable is also reported. Evidently, employment has the lowest variability over the period 1981-2006, while Public Expenditure has the highest.

Table 1: Descriptive Statistics on Selected Variables of Nigeria (1981-2006)

Variables	Number of Observations	Mean	Standard Deviation
Employment in million	26	32.25577	10.57272
GDP Growth Rate in %	25	3.924000	13.90543
GDP in million ₦	26	364,214.1	105640.0
Foreign Private Capital in million ₦	26	35.44078	33.51379
Public Expenditure in million ₦	26	447.6500	191.7550

Source: Computed by the authors

A correlation matrix which shows the magnitude and direction of the relationship between each pair of variables being analysed is presented in Table 2. A negative sign of a correlation coefficient shows there is an inverse relationship between the two variables. The correlation matrix is symmetric about the diagonal and the diagonal has values of 1.000000 since there is a perfect correlation of the variable with itself. The correlation matrix shows that all but FPC among the explanatory variables have the expected positive relationship with the dependent variable EMP. However, it is observed that EMP and GDP have a strong positive correlation coefficient of 0.899. This is expected given the postulated strong and positive relationship between employment and output in economic literature. In contrast, the growth rate of GDP (GDPGR) has a positive but relatively low correlation coefficient with the employment level in the economy (0.09). This is rather surprising as economic growth is expected to be job-creating and as such exhibit positive and strong correlation between EMP and GDPGR in an economy experiencing an aggregate unemployment rate of about 20% and youth unemployment rate of over 40% (NBS, 2010).

Table 2: Correlation Matrix of Variables

Variables	EMP	GDP	GDPGR	FPC	PE
EMP	1.000000	0.899326	0.097846	-0.577407	0.826422
GDP	0.899326	1.000000	0.369382	-0.357253	0.874968
GDPGR	0.097846	0.369382	1.000000	0.270593	0.280082
FPC	-0.577407	-0.357253	0.270593	1.000000	-0.223286
PE	0.826422	0.874968	0.280082	-0.223286	1.000000

Source: Authors' computation

4.2 Regression Analysis

Table 3 gives a presentation of the Unit Root test using the Augmented Dickey-Fuller approach for the selected data series used in the study. Only GDPGR (growth rate of gross domestic product) and FPC (Foreign Private Capital) are stationary at levels while the others are non-stationary. The other variables: EMP (total employment), GDP (Total Gross Domestic Product) and PE (Public Expenditure) only became stationary after the first differencing. In order to purge our data of non-stationarity, we decided to detrend the data series. This was done using the Hodrick-Prescott filter to ensure stationarity of the data series of the variables. The Hodrick-Prescott Filter is a smoothing method that is widely used among macroeconomists to obtain a smooth estimate of the long-term trend component of a series.

Table 3: Augmented Dickey-Fuller Unit Root Test

Series	Levels	First Difference	Second Difference	Decision
EMP	-1.408646	-5.244630	-4.802088	I (1)
GDPGR	-6.554013	-5.701999	-3.676568	I (0)
GDP	-3.044414	-7.176150	-4.122747	I (1)
FPC	-5.029635	-6.711132	-4.759011	I (0)
PE	-1.867778	-7.553897	-7.209272	I (1)
Critical Value at 10% level		Levels : -3.24	1 st Diff: -3.24	2 nd Diff: -3.26

Tables 4 and 5 present the estimated results of the ordinary least squares estimation of the relationship between employment and the selected macroeconomic variables. We estimated an equation with the level of employment (EMP) as dependent variable and real Gross Domestic Product (GDG), real GDP growth rate (GDPGR), foreign private capital (FPC) and public expenditure (PE) as the explanatory variables in the analysis. In total, we estimated four equations. Regression 1 in Table 4 gives the result of the OLS estimate of Equation 2 at levels. This gave a spurious result as earlier anticipated since the data sets for the variables are not all stationary at levels as reported in Table 3. The estimation of the detrended series gave the result reported in Regressions 3 and 4 in Table 4. We are however surprised that the *a priori* expectation with respect to the sign of GDP (in regression 3) and FPC was not fulfilled as both variables reported negative signs. However, a substitution of GDP with GDPGR gave a better result as shown in Regression 4. For instance, R^2 improved slightly from 0.9963 to 0.9969; while GDPGR and PE have the expected positive sign and both are significantly different from zero. However, in line with the coefficient of correlation reported in Table 2, the regression coefficient estimate of FPC maintains a statistically significant negative relationship with EMP which runs contrary to *a priori* expectation.

Table 5 reports the estimation of Equations 3(a) and 3(b) which gave rise to Regressions 5 and 6. All the explanatory variables except FPC have the expected sign. As it is the case for Regression 4, Regression 6 with LN GDPGR used instead of LN GDP gave a better result. R^2 improved considerably from 89% to 96%; F statistic ballooned from 60 to 137 and all the explanatory variables are significantly different from zero. However, just as the case for Regression 4; FPC maintains a negative but statistically significant relationship with the dependent variable, LN EMP.

TABLE 4: OLS REGRESSION RESULT OF VARIABLES AT LEVELS (DEPENDENT VARIABLE: EMPT)

VARIABLES, CONSTANTS	EQUATION 2: AT LEVELS		EQUATION 2: AFTER DETRENDING	
	REGRESSION 1	REGRESSION 2	REGRESSION 3	REGRESSION 4
CONSTANT	7.758339 (1.736297)	19.39159	5.130514 (1.243914)	16.34455 (5.256770)
REAL GDP	5.87E-05*** (3.670368)		-0.0000788*** (-4.840798)	
GDPGR		0.003866 (0.053644)		0.352848 (1.697132)
FPC	-0.091075** (-2.311532)	-0.128166*** (-4.409527)	-0.111296 (0.129167)	-0.155010*** (-4.463226)
PE	0.014191 (2.157986)**	0.039674*** (7.753047)	0.005313 (1.251892)	0.045065*** (7.732729)
R-squared	0.896139	0.845447	0.996312	0.996955
Adjusted R-squared	0.881976	0.823369	0.995809	0.996520
D-W STATISTICS	2.119533 AR(1)	2.315014	1.669084	2.014906 AR(14)
F STATISTIC	63.27364	38.29204	1981.225	262349.4
t statistic values are in parenthesis			*** Significant at 1% level of Confidence	
** Significant at 5% level of Confidence			*Significant at 10% level of	
Confidence				

Source: Computed by the authors.

Though this contrasts sharply with *apriori* expectations, but for the case of a developing economy like Nigeria, it appears plausible. For instance, foreign private investment that is of high vintage technology are likely to be highly capital intensive thus increasing GDP without generating proportionate level of employment. Another side to the issue of private capital has to do with the fact that many of the providers of such capital may also provide a good number of the employees from the host nations. All these might account for the observed negative relationship between EMP and FPC in the model.

TABLE 5: REGRESSION RESULT OF LOGARITHM OF DETRENDED VARIABLES

VARIABLES, CONSTANTS	EQUATION 3A		EQUATION 3B	
	REGRESSION 5		REGRESSION 6	
	Coefficient	t-Statistic	Coefficient	t-Statistic
CONSTANT	- 6.425466** *	-3.011305	3.718161***	26.38059
LN GDP	0.759498** *	3.904521		
LN GDPGR			0.047770***	7.580513
LN FPC	-0.088172**	-2.376019	-0.494539***	-12.93650
LN PE	0.070799	0.719665	0.218538***	5.326817
R-SQUARED	0.891143		0.955794	
ADJ. R-SQD.	0.876299		0.948814	
DW	2.094952 AR(1)		2.279894 AR(15)	
F	60.03334		136.9352	

Note: *** Significant at 1% level of Confidence

** Significant at 5% level of Confidence *Significant at 10% level of Confidence

Using regression 6 that has the best overall fit, it is to be noted that the variables are in Log form and therefore the coefficients are to be interpreted as elasticities. Thus, the employment elasticity of GDPGR is 0.05; meaning that a unit change in economic growth brings about a 0.05 percentage change in employment. Similarly the employment elasticity of FPC and PE are found to be -0.49 and 0.22 respectively. Employment elasticities reported above have provided some numerical measures of how employment varies with growth in economic output on one hand and other macroeconomic variables reported in the model, on the other hand. Though discussed less frequently than other key labour market indicators, employment elasticities provide important information about labour markets. In this study, the employment elasticity of economic growth is 0.05 (less than one). This is indicative of the fact that a given level of output growth produces less than a proportionate change in the level of aggregate employment in the economy. This observed inelastic relationship between the employment growth rate and growth rate of real GDP in the Nigerian economy is an object of concern because it is low relative to the recommended figure of 0.7 by an ILO-sponsored study by Khan (2001). In line with Khan's recommendation, the ILO (2006) is of the view that 'countries with large number of impoverished workers may need to achieve relatively higher employment elasticities than less labour-abundant, more developed economies, in order to provide sufficient employment opportunities for the working poor. To this end, developing economies often require higher employment elasticities for a given rate of economic growth than developed economies, as the former tend to have a surplus labour'.

5. Findings, Implications and Conclusion

This study examined the employment and economic growth relationships in the Nigerian economy by estimating the elasticity of economic growth using the OLS econometric approach. A simple model of employment and its basic determinants was employed using a non-linear model that was log-linearised for econometric estimation purposes. A total of four explanatory variables were included in the model and they explained about 95% of the variations in the dependent variable (EMP). This study has made two important findings. One, the employment elasticity of economic growth is found to be positive and significant at the end of the two estimations carried out (one before the detrending of variables and the other one after it). This indicates that the notion of jobless growth (where economic growth is negatively related to level of employment) does not apply to the Nigerian economy within the period of study.

Thus the high level of unemployment currently experienced in Nigeria can be attributed, *ceteris paribus*, to the relatively low employment intensity of GDP growth as measured by the observed employment elasticity of 0.05. Second, the negative relationship between the level of employment and foreign private investment is pointing to the fact that either the private investors are using the 'wrong' technology of production in terms of using capital-intensive, rather than labour intensive method of production in a labour-surplus economy like Nigeria. Alternatively, the foreign investors might be using FPC to create jobs, not for Nigerians, but for their own nationals if they end up hiring their own nationals and import them to the host country. Several implications for policy formulation and further research can be gleaned from this study. Given the observed low elasticity of employment relative to the recommended benchmark, the public sector has a key role to play in job creation alongside the private sector. Thus, in addition to providing the necessary macroeconomic environment for economic growth enhancement, government policies on the quantum and direction of public expenditure are expected to improve employment generation which is expected to increase the level of output. The negative relationship between the log of FPC and EMP is probably an indication that the foreign capital in the Nigerian economy within the period of study is not labour intensive but rather capital intensive. An appropriate policy to reverse this trend is expected to contribute significantly to employment generation.

References

- Adebayo, A., & Ogunrinola, I. O. (2006). *Contemporary Dimensions of Unemployment Problem in Nigeria: A Special Challenge Under the National Economic Empowerment and Development Strategy*. The Nigerian Economic Society, Nigeria.
- Barro, R. J. (1991). Economic Growth in a Cross Section of Countries; *Quarterly Journal of Economics*, 106 (2), 407-443.
- Becker, G.; Kevin, M., and R. Tamura (1990). Capital, Fertility and Economic Growth. *Journal of Political Economy*, 98, S12-S37.
- Central Bank of Nigeria. (2000). *The Changing Structure of the Nigerian Economy and Implications for Development*. Lagos: CBN.
- Central Bank of Nigeria. (2006). *Statistical Bulletin*. Abuja: CBN.
- Engle, R. F., & Yoo, B. S. (1987). Forecasting and Testing in Cointegrated Systems. *Journal of Econometrics*, 35 (1), 143-159.
- Fofana, N. F. (2001). Employment and Economic Growth in the Cote d'Ivoire: An Analysis of Structural Determinants. *African Development Bank Review*, 98-112.
- Heintz, J., & Pollin, R. (2008). *Targeting Employment Expansion, Economic Growth and Development in SSA: Outlines of an Alternative Economic Programme for the Region*. Economic Commission for Africa.
- International Labour Organisation. (2001). *Key Indicators of the Labour Market (KILM) 2001-2002*. ILO-UNDP.
- Iwayemi, A. (2006). Modelling the Nigerian Economy for Growth and Employment. In *Employment Generation in Nigeria: Selected Papers for the 2006 Annual Conference* (pp. 31-66). Ibadan: Nigerian Economic Society.
- Jhingan, M. L. (1997). *Advanced Economic Theory* (Micro- and Macroeconomics). Delhi: Vrinda Publications (P) Ltd.
- Khan A. (2001). *Employment Policies for Poverty Reduction ; Recovery and Reconstruction*. Department, International Labour Organisation, Geneva.
- Levine, R., & Renelt, D. (1992). A Sensitivity Analysis of Cross-Country Growth Regressions. *American Economic Review*, 82 (4), 942-963.
- National Bureau of Statistics (2010). *Statistical News: Labour Force Sample Survey*, Abuja Nigeria
- Ogunrinola (1991). *Employment and Earnings in the Urban Informal Sector of Ibadan*. An unpublished Ph.D Thesis submitted to the Department of Economics, Obafemi Awolowo University, Ile-Ife, Nigeria.
- Ogunrinola, I.O. and Osahubohien (2010). Globalisation and Employment Generation in Nigeria's Manufacturing Sector (1990-2006). *European Journal of Social Sciences; Vol 12, NO. 4*; pp. 581-593.
- Oladeji, S.I. (1987). Graduate unemployment Paradoxes in the LDC: Implications for Research in Nigeria. *The Nigerian Journal of Economic and Social Studies*, Vol 29, No. 2 pp 133-148
- Oladeji, S. I. (1994). *Absorption of Educated Manpower into Nigeria's Informal Sector*. National Manpower Board.
- Omotor, D. G., and A.N. Gbosi (2006). The Dynamics of Productivity and Unemployment Nexus: Implications for Employment Generation in Nigeria. In NES, *Employment Generation in Nigeria* (pp. 177-197). Ibadan: Nigerian Economic Society.
- Oni, Bankole and A. Dabalen. (2000). *Labour Market Prospects for University Graduates in Nigeria*. World Bank.
- Oni, B. (2006). Employment Generation: Theoretical and Empirical Issues. In NSE, *Employment Generation in Nigeria: Selected Papers for the 2006 Annual Conference* (pp. 11-30). Ibadan: Nigerian Economic Society.
- Pandalino, S., and M. Vivarelli (1997). The Employment Intensity of Economic Growth in the G-7 Countries. *International Labour Review*, 136 (2), 191-213.
- Patterson, C. E., and E.W. Okafor (2006). *Globalisation and Employment Generation: Evaluating the Impact of Trade on Aggregate Employment in Nigeria's Industrial Sector*. In NSE, 'Employment Generation in Nigeria' (pp. 309-339). Ibadan: Nigerian Economic Society.
- Sawtelle, B. (2007). Analysing the Link Between Real GDP and Employment: An Industry Sector Approach. *Business Economics*, 46-54.
- Solow, R. (1956). A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics*, 65-94.
- Swane, A., and H. Vistrand (2006). *Jobless Growth in Sweden? A Descriptive Study*. Being a Master's Thesis in International Economics and Business at Stockholm School of Economics.
- Walterskirchen, E. (1999). *The Relationship Between Growth, Employment and Unemployment in the EU*. European Economist for an Alternative Economic Policy Workshop, Barcelona, Spain. , http://www.memoeurope.uni-bremen.de/tser/Walterskirchen_24months.PDF.
- Yogo, T. (2008). Growth and Employment in Sub Saharan Africa: Theoretical Evidence and Empirical Facts. *Munich Personal RePEc Archive*, Paper No 10474 , <http://mpra.ub.uni-muenchen.de/10474/>.